

RF 440.98105N 5/5/05

- 3 -

In the claims:

Please amend the claims as shown below:

1. (Original) A method for coating an implant device,
5 comprising:
coating the implant device with a protein;
covalently immobilizing a first substance having an amino
group to the protein; and
adsorbing a bisphosphonate substance to the first substance,
10 the first substance being different from the bisphosphonate
substance.

2. (Original) The method according to claim 1 wherein the
immobilizing step comprises covalently linking a reactive
15 group such as an amino group of bisphosphonate to the
protein.

3. (Original) The method according to claim 1 wherein the
adsorbing step comprises using a chemically non-reactive
20 bisphosphonate.

4. (Original) The method according to claim 1 wherein the
coating steps further comprises using a cross-linked protein.

- 25 5. (Original) The method according to claim 1 wherein the
method further comprises etching a surface of the implant
device.

- 30 6. (Original) The method according to claim 1 wherein the
method further comprises creating a plurality of protein
layers by cross-linking the protein layers with ethyl-
dimethyl-aminopropylcarbodiimide (EDC) and hydroxy-
succinimide (NHS).

BEST AVAILABLE COPY

RF 440.981USN 5/5/05

- 4 -

7. (Original) The method according to claim 1 wherein the coating step further comprises immobilizing a first protein layer onto a surface of the implant device via an attachment of amino propyl triethoxy silane (APTES).
5

8. (Original) The method according to claim 7 wherein the coating steps further comprises using glutaraldehyde to chemically bind the APTES and glutaraldehyde to amino groups of the first protein layer.
10

9. (Original) An implant device, comprising:
a multilayer of protein chemically bound to a surface of the implant device;
15
a chemically immobilizable bisphosphonate layer covalently bound to the protein film; and
a chemically non-reactive bisphosphonate layer non-covalently bound to the first bisphosphonate layer.

10. (Original) The implant device according to claim 9 wherein the second bisphosphonate layer is bound to the protein film only by non-covalent interactions.
20

BEST AVAILABLE COPY